NEC

# *VERSA M350/P550*

# *Disassembly Manual*

NEC

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## Overview

This document contains step-by-steps disassembly instructions for the VERSA M350/P550 chassis. The instructions are illustrated where necessary with images of the part that is being removed or disassembled. Furthermore, the screws that are removed are shown next to the image of the parts themselves.

NEC reserves the right to make changes to the VERSA M350/P550 chassis without notice.

## Technician Notes

Only technicians authorized by NEC Personal Products LTD. should attempt to repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indication of component replacement or printed wiring board modifications may void any warranty or exchange allowances.

## Disassembly Instructions

When disassembling the system unit, follow these general rules:

- Do not disassemble the system into parts that are smaller than those specified in the instructions.
- Label all removed connectors. Note where the connector goes and in what position it was installed.
- Turn off the power and disconnect all power and all options.

## Reassembly Instructions

Reassembly is the reverse of the disassembly process. Use care to ensure that all cables and screws are returned to their proper positions. Check that no tools or any loose parts have been left inside the chassis. Check that everything are properly installed and tightened.

## Required Tools

All disassembly procedures can be perform using the following tools:

- PH 0x60 Philips screwdriver
- PH 0x40 Philips screwdriver
- SW5.0 Spacer screwdriver
- Flat screwdriver
- Small tweezers
- Pin

## Hazardous Voltage

There is hazardous voltage present inside the computer when it is connect to an AC supply, even when the computer's power switch is off. Exposure to hazardous voltage could cause personal injury. To avoid risk of injury, contact an Authorized Service Provider for proper (UN)installation of optional hardware devices.

## Avoid Electrostatic Discharge

Electrostatic electricity can easily damage circuit cards and integrated circuits (ICs). To reduce risk of damage, store them in protective packaging whenever they are not installed in your system.

Add-in cards can be extremely sensitive to ESD and always require careful handling. After removing the card from the computer, place the card flat on a grounded, static-free surface, component-side up. Use a conductive foam pad if available, but not the card wrapper. Do not slide the card over any surface.

Before you install or remove memory modules, video memory, disk drives, circuit cards or other devices, protect them from static electricity. To do so, make sure your computer's power switch is OFF. Then, unplug the computer's AC power cord. Before picking up the device you (un)install, you should wear an anti-static wrist wrap (available at electronic supply stores). Be sure to connect the wrist wrap to an unpainted metal portion of the computer chassis. As an alternative, you can dissipate electrostatic build-up by touching an unpainted metal portion of the computer chassis with one hand. Then touch the device you are (un)installing with the other hand, and maintain continuous contact with it until it is (un)installed in the computer.

## Power Supply Unit

Under no circumstances should you attempt to disassemble the power supply. The power supply contains no user-serviceable parts. Inside the power supply are hazardous voltages that can cause serious personal injury. Always return a defective power supply to your dealer.

**WARNING**
Ensure that the computer is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the computer with the cover removed.

**AVERTISSEMENT**
Assurez-vous que le système est débranché de son alimentation ainsi que de toutes les liaisons de télécommunication, des réseaux, et des lignes de modem avant d'enlever le capot. Ne pas utiliser le système quand le capot est enlevé.

**WARNUNG**
Das System darf weder an eine Stromquelle angeschlossen sein noch eine Verbindung mit einer Telekommunikationseinrichtung, einem Netzwerk oder einer Modem-Leitung haben, wenn die Gehäuseabdeckung entfernt wird. Nehmen Sie das System nicht ohne die Abdeckung in Betrieb.

**ADVERTENCIA**
Asegúrese de que cada vez que se quite la cubierta del chasis, el sistema haya sido desconectado de la red de alimentación y de todos lo enlaces de telecomunicaciones, de red y de líneas de módem. No ponga en funcionamiento el sistema mientras la cubierta esté quitada.

**WAARSCHUWING**
Zorg er voor dat alle verbindingen van en naar de computer (stroom, modem netwerk, etc) verbroken worden voordat de behuizing geopend wordt. Zet de computer nooit aan als de behuizing geopend is.

**AVVERTENZA**
Prima di rimuovere il coperchio del telaio, assicurarsi che il sistema sia scollegato dall'alimentazione, da tutti i collegamenti di comunicazione, reti o linee di modem. Non avviare il sistema senza aver prima messo a posto il coperchio

## Removing the Battery

Perform the following steps to remove the battery:

1. Make sure to power off the VERSA M350/P550
2. Turn the unit upside down.
3. Unlock the battery and slide it out of its place as the arrow shows in Fig. 1

***Fig. 1*** *Removing the battery*

## Removing the Memory Module

To remove the Memory Module, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Release the one screw retaining the memory module cover.

**M2x4 Sliver**

***Fig. 2*** *Removing the screw retaining the memory module slot cover*

2. Unclip the memory module as shown in Fig. 3

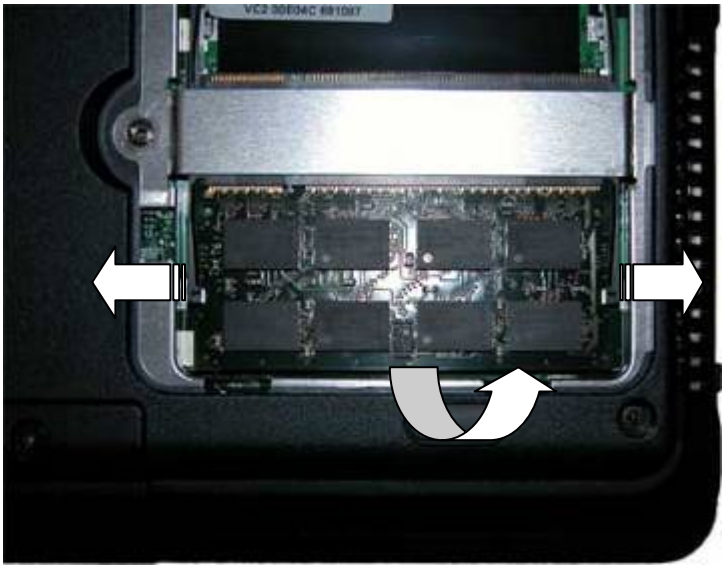


***Fig. 3*** *Removing the memory module*

3. Remove the memory module from its slot and put it aside.

## Removing the Hard Disk Drive

To remove the hard disk drive, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Remove the screws as shown in Fig. 4

M3x7 Copper

***Fig. 4*** *Removing the Hard disk drive cover*

2. Release the screws that secure HDD module as shown in Fig. 5 and carefully pull the HDD module out from the base unit.

M3x7 Copper

***Fig. 5*** *Screw retaining the HDD module*

## Removing the Optical Disk Drive

To remove the ODD, first remove the battery (see *Removing the Battery*) then perform the following steps:

1. Remove the screws retaining the optical drive as shown in Fig. 6

***Fig. 6*** *Releasing the optical drive*

**M2.5x9 Copper**

2. Eject the optical drive using pin as shown in Fig. 7

***Fig. 7*** *Ejecting the optical drive*

3. Flip over the unit, and pull the ODD module out from the base unit as shown in Fig. 8

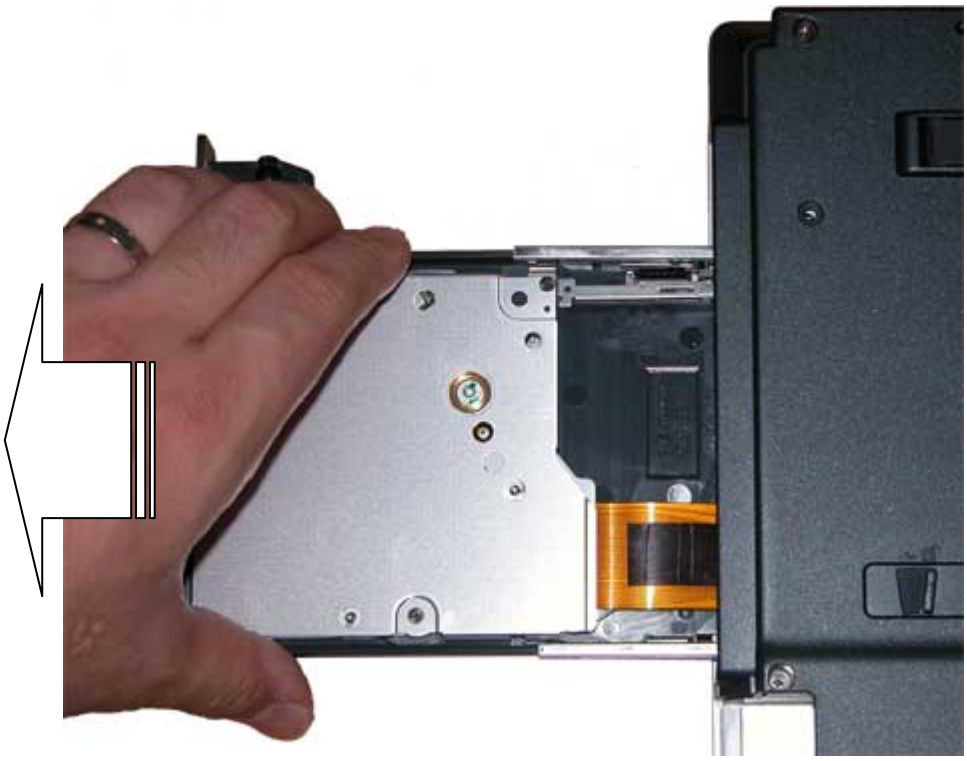


***Fig. 8*** *Pulling the optical drive out from the base unit*

## Removing the Keyboard

To remove the Keyboard, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Release the keyboard cover from the rear of the system as shown in Fig. 9

***Fig. 9*** *Releasing the keyboard cover*

2. Lift up the keyboard cover carefully as shown in Fig. 10

***Fig. 10*** *Lifting up the Keyboard Cover*

3. Lift up the keyboard and disconnect it from the system as shown in Fig. 11

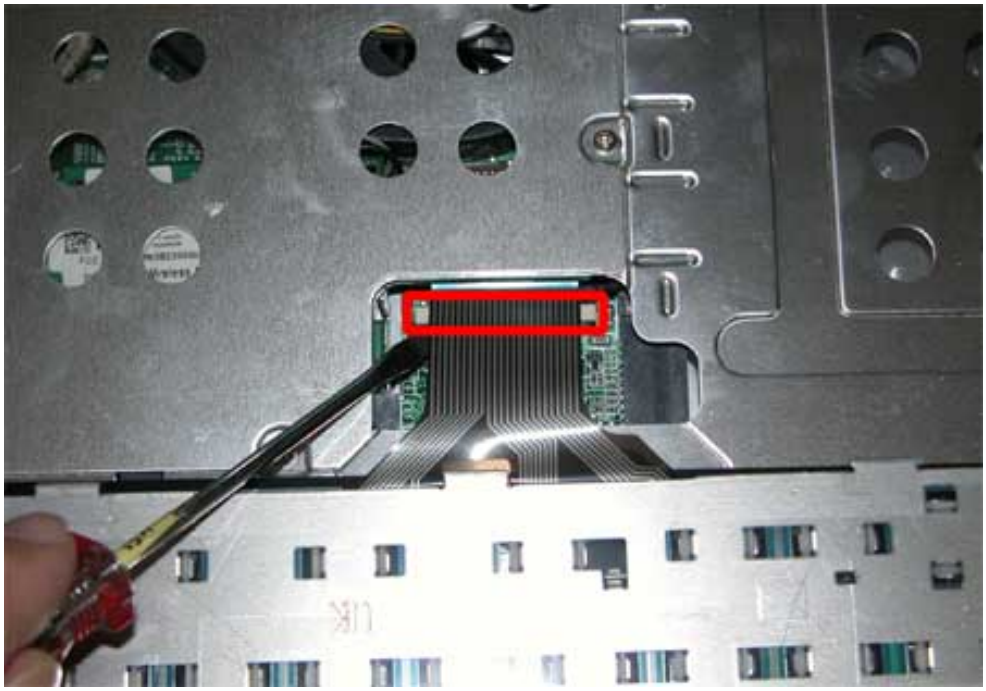


***Fig. 11*** *Disconnecting the keyboard flat cable*

## Removing the Wireless LAN Module

To remove the Wireless LAN Module first remove the battery (see *Removing the Battery*) and remove the Keyboard (see *Removing the Keyboard*) then perform the following steps:

1. Remove the screws retaining the Heat Plate as shown in Fig. 12 and lift it up carefully

M2.5 x 7 Sliver

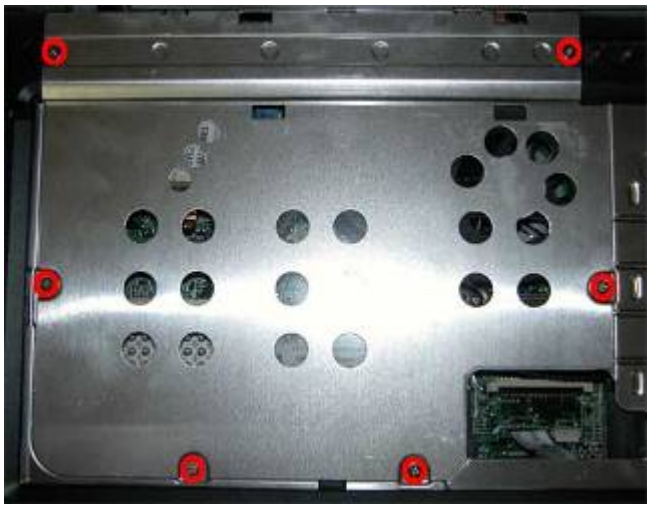


***Fig. 12*** *Removing the screws retaining the Heat Plate*

2. Disconnect wireless antenna connection and then release it from mini PCI slot as shown in Fig. 13

***Fig. 13*** *Releasing Wireless LAN module*

## Removing the CPU (For K2S)

To remove the CPU first remove the battery (see *Removing the Battery*) and remove the Keyboard (see *Removing the Keyboard*) then perform the following steps:

3. Remove the screws retaining the Heat Plate as shown in Fig. 14

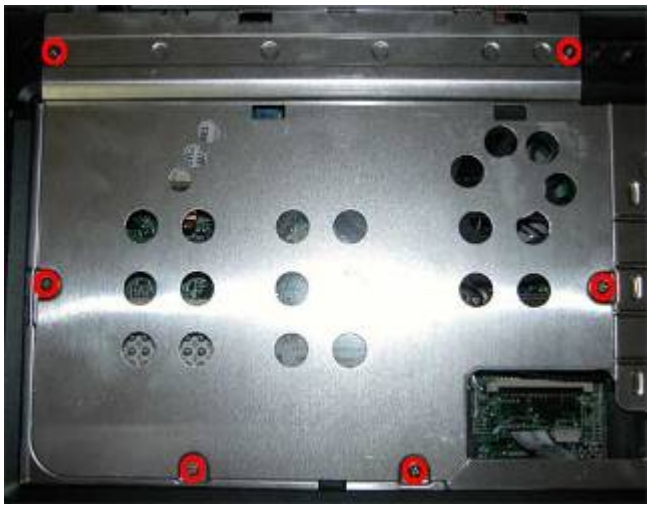


***Fig. 14*** *Removing the screws retaining Heat Plate*

**M2.5 x 7 Sliver**

4. Disconnect Fan connection and remove the CPU Heat sink screws around CPU socket in descending order (6→5→4→3→2→1), then lift up the CPU heat sink and CPU Fan separately.

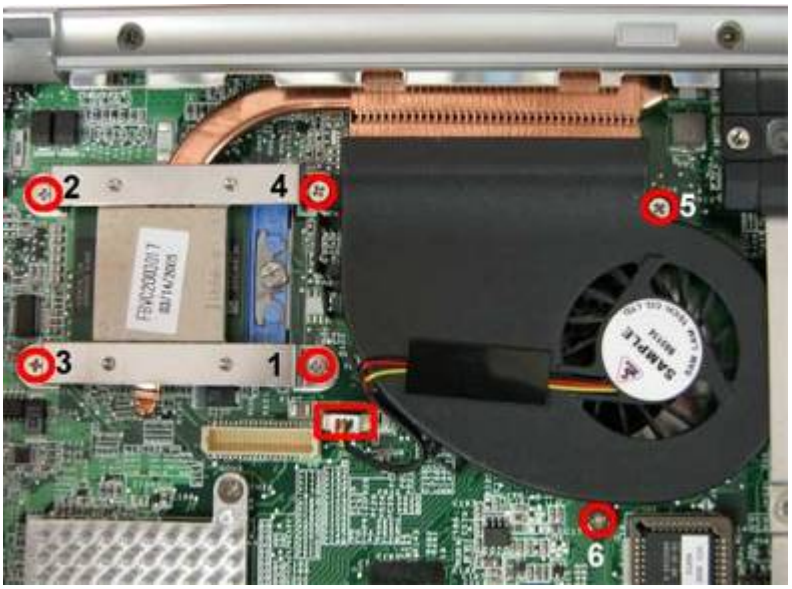



***Fig. 15*** *CPU Heat Sink*

**M2.5 x 6 Sliver**

**Note:** Beware of screws use on the CPU heat sink! Make sure to use the screw size M2.5x7, otherwise it might cause damage to the CPU die. Secure the screw around the CPU socket first before other screws.

5. Use Flat screwdriver to unlock the CPU from the CPU socket and lift up the CPU carefully.

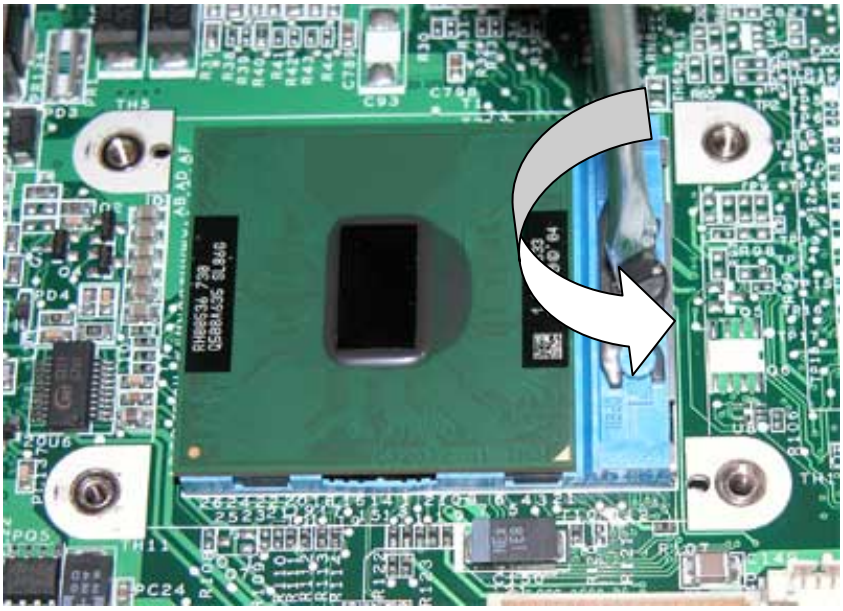


***Fig. 16*** *Unlocking the CPU*

## Removing the CPU (For K2ST)

To remove the CPU first remove the battery (see *Removing the Battery*) and remove the Keyboard (see *Removing the Keyboard*) then perform the following steps:

1. Remove the screws retaining the Heat Plate as shown in Fig. 17

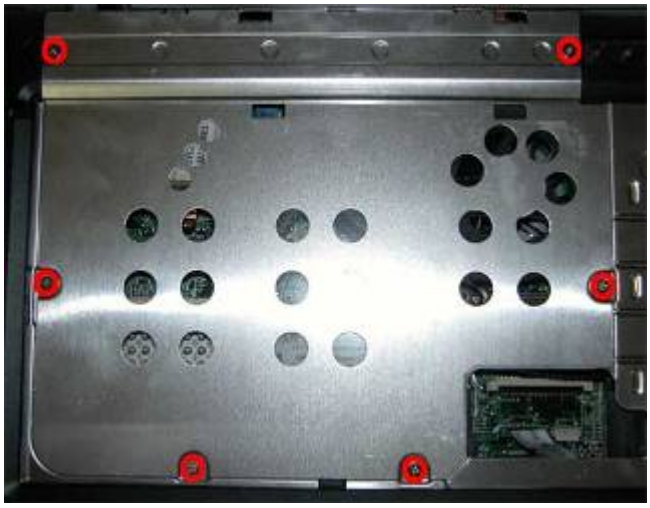
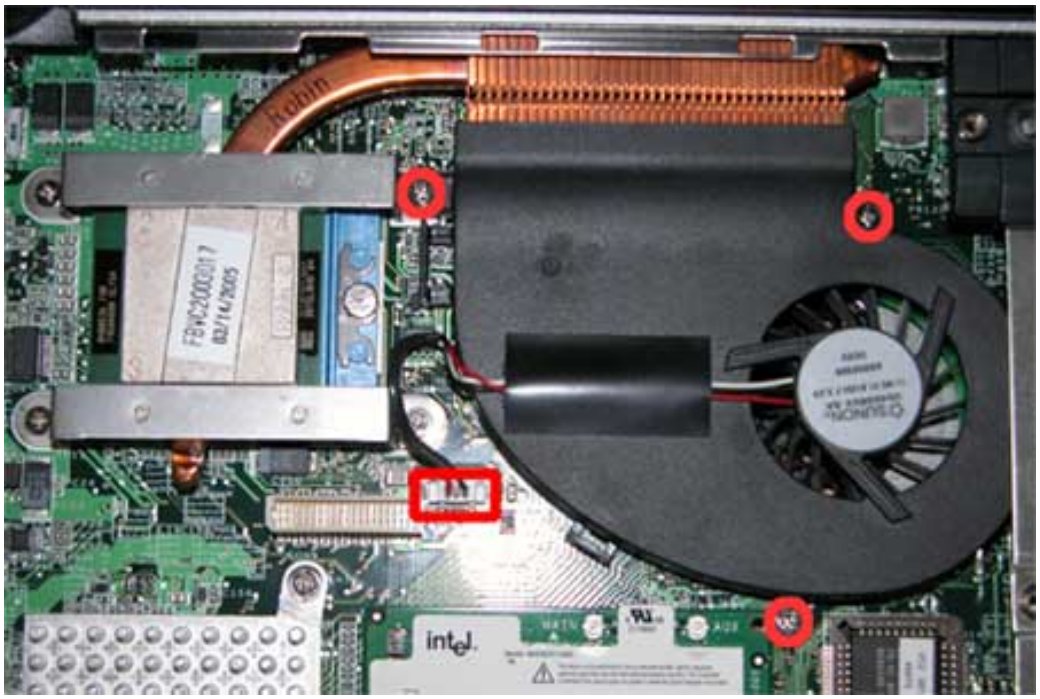


***Fig. 17*** *Removing the screws retaining Heat Plate*

**M2.5 x 7 Sliver**

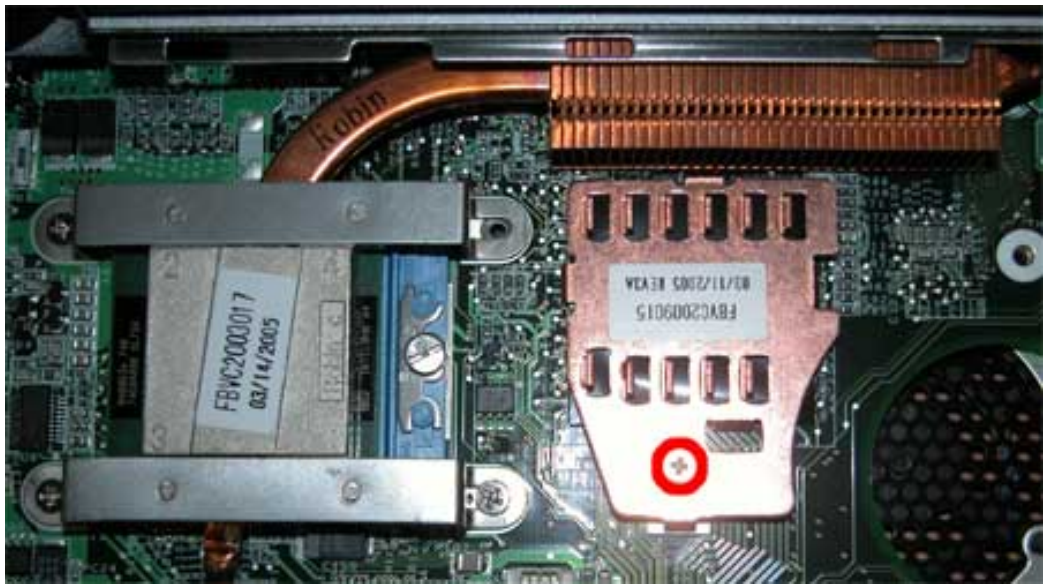
2. Remove the CPU Fan screws and disconnect CPU Fan as shown in Fig. 18



M2.5 x 6 Sliver

***Fig. 18*** *CPU Fan*

3. Unscrew the GPU heat sink.



M2x4 Sliver

***Fig. 19*** *GPU Heat Sink*

4. Disconnect Fan connection and remove the CPU Heat sink screws around CPU socket in descending order (3→2→1), then lift up the CPU heat sink.

M2.5 x 7 Sliver

***Fig. 20*** *CPU Heat Sink*

**Note:** Beware of screws use on the CPU heat sink! Make sure to use the screw size M2.5x7, otherwise it might cause damage to the CPU die. Secure the screw around the CPU socket first before other screws.

5. Use Flat screwdriver to unlock the CPU from the CPU socket and lift up the CPU carefully.

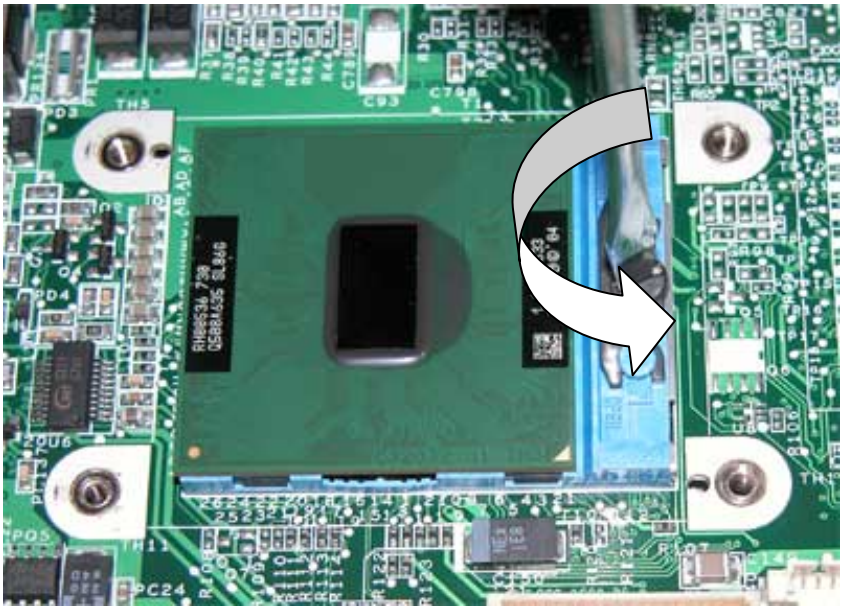


***Fig. 21*** *Unlocking the CPU*

## Removing the LCD Module

To remove the LCD Module first remove the battery (see *Removing the Battery*) and remove the Keyboard (see *Removing the Keyboard*) then perform the following steps:

1. Remove the screws retaining the Heat Plate as shown in Fig. 22

M2.5 x 7 Sliver

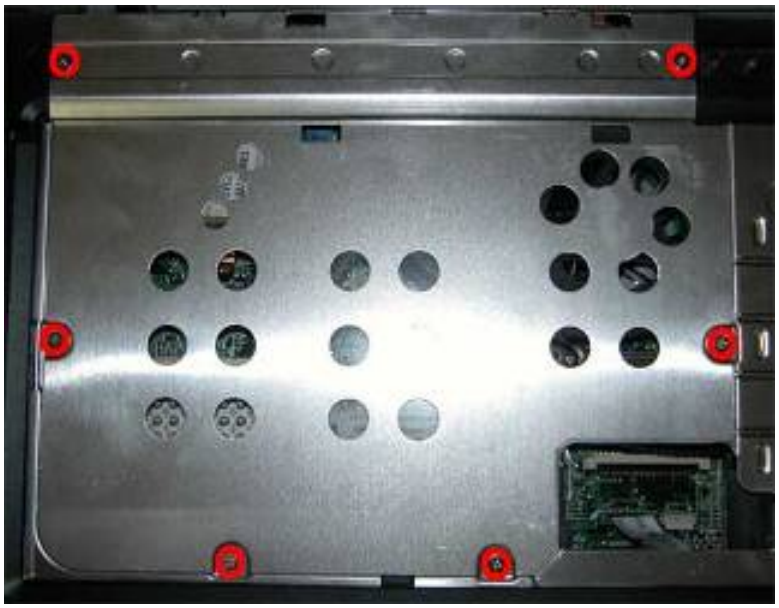


***Fig. 22*** *Removing the screws retaining the Heat Plate*

2. Release the LCD cable connector.

***Fig. 23*** *Removing LCD Cable Connector*

3. Disconnect Wireless module antenna connector.

***Fig. 24*** *Disconnection Wireless Module antenna connector*

4. Flip over the base unit and release the screws retaining the LCD Module.

**M2.5x9 Copper**

***Fig. 25*** *Removing the screws retaining the LCD Module*

5. Release the screws on the system rear side as shown in Fig. 26

**M2.5x9 Copper**

***Fig. 26*** *Removing the screws retaining the LCD Module*

6. Carefully lift up the LCD Module.

## Removing the LCD Panel

To remove the LCD panel, first remove the LCD module (see *Removing the LCD Module*), then perform the following steps:

1. Use a pin to remove the rubber cover on the LCD module as shown in Fig. 27
2. Remove all screws as shown in Fig. 27 and carefully remove the LCD cover.

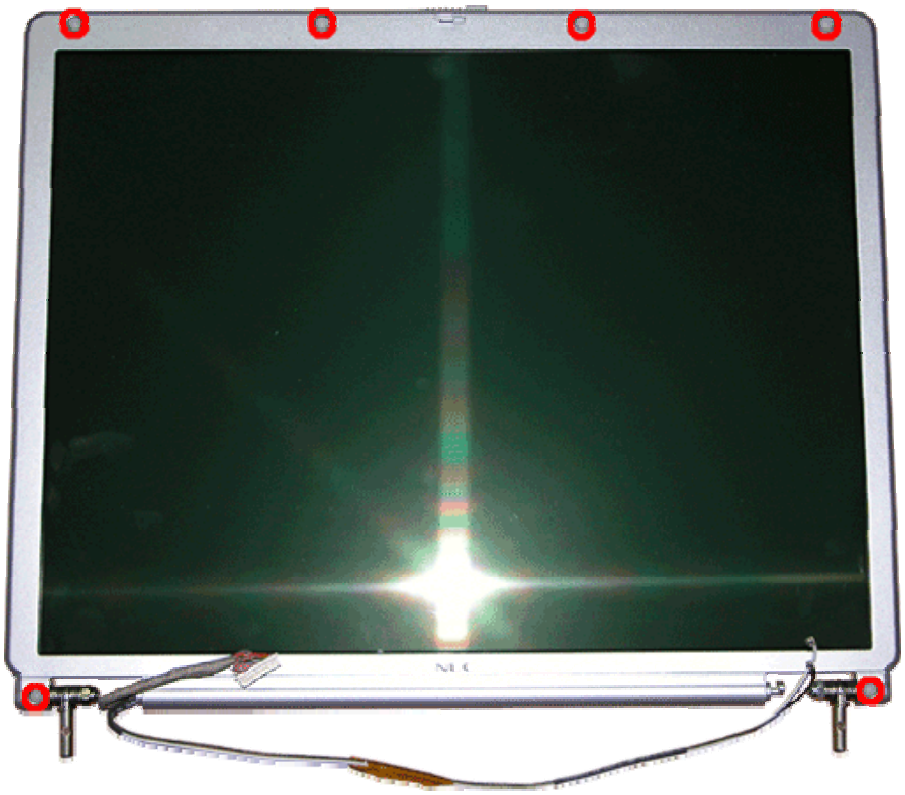


***Fig. 27*** *Removing the rubber covers & screws on the LCD Module*

**M2.5X7 Copper**

3. Removing LCD Bezel as shown in Fig. 28

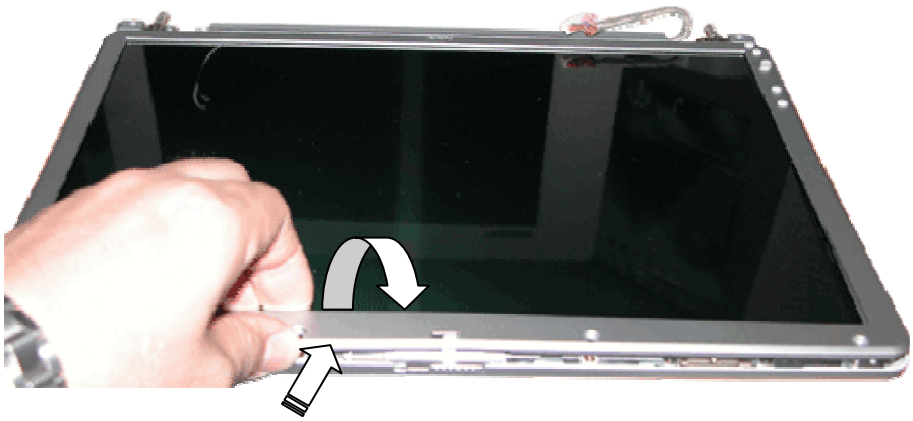


***Fig. 28*** *Removing LCD Bezel*

4. Release the inverter board by remove the screw and disconnect all connectors as shown in Fig. 29

M2x3 Copper

***Fig. 29*** *Removing the Inverter Board*

5. Carefully lift up the LCD panel.
6. Remove the screws at both sides of the LCD panel in order to release the LCD hinges as shown in Fig. 30

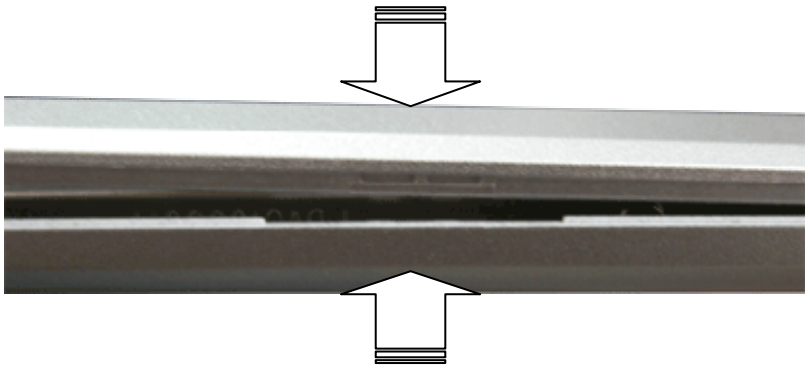
M2x3 Copper

***Fig. 30*** *Removing the LCD Panel hinges*

**Note:** Beware when assembly LCD Bezel. You need to follow below instruction to ensure it properly close at both left and right side of the Bezel.

1. Push on top of Bezel.

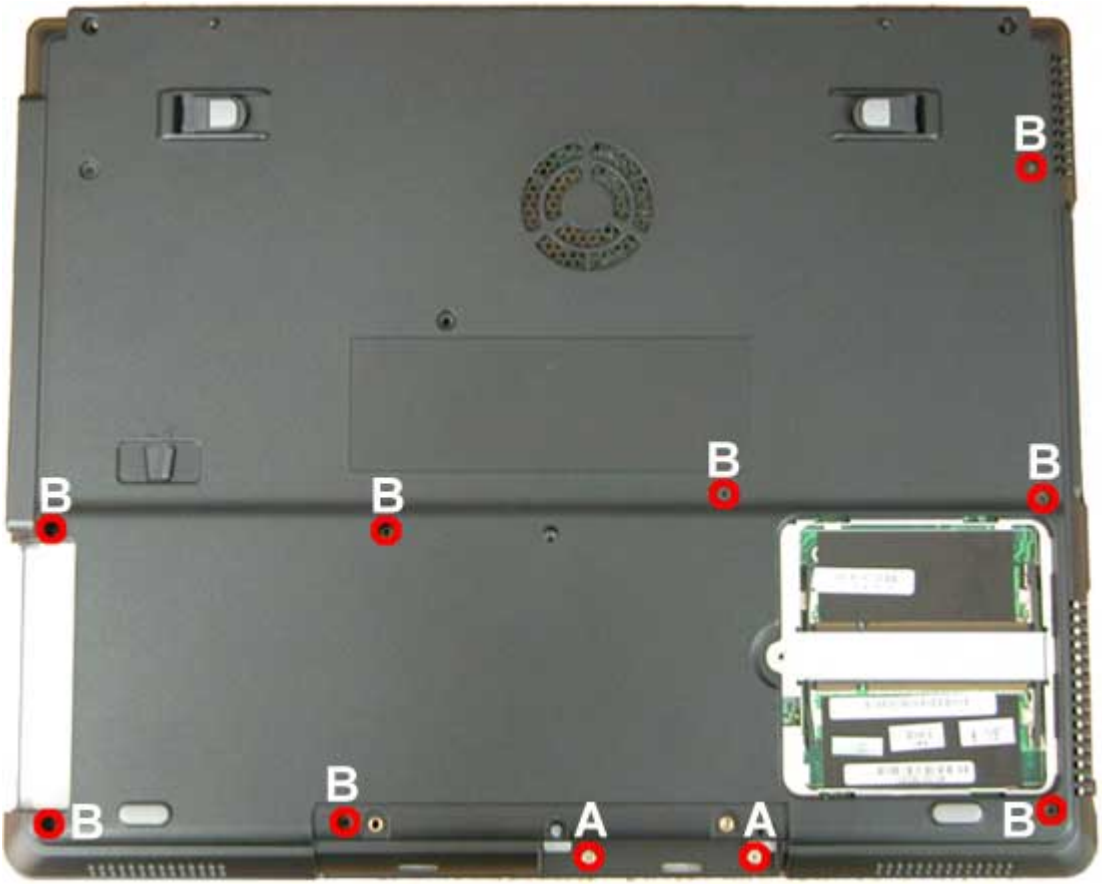
2. Push at the side of LCD cover inward to close the gap



## Removing the Top Cover

To remove the Top Cover , first remove the battery (see *Removing the Battery*), remove the HDD (see *Removing the Hard Disk Drive*), remove the Optical Disk Drive (see *Removing the Optical Disk Drive*), remove the Keyboard (see *Removing the Keyboard*) and remove the LCD Module (see *Removing the LCD Module*) then perform the following steps:

1. Remove all screws on the bottom of the base unit as shown in Fig. 31



**A=M2x4 Sliver**

**B=M2.5x9 Copper**

***Fig. 31*** *Bottom Cover*

2. Release all screws on the top cover and disconnect touch pad cable as shown in Fig. 32

***Fig. 32*** *Top Cover screws*

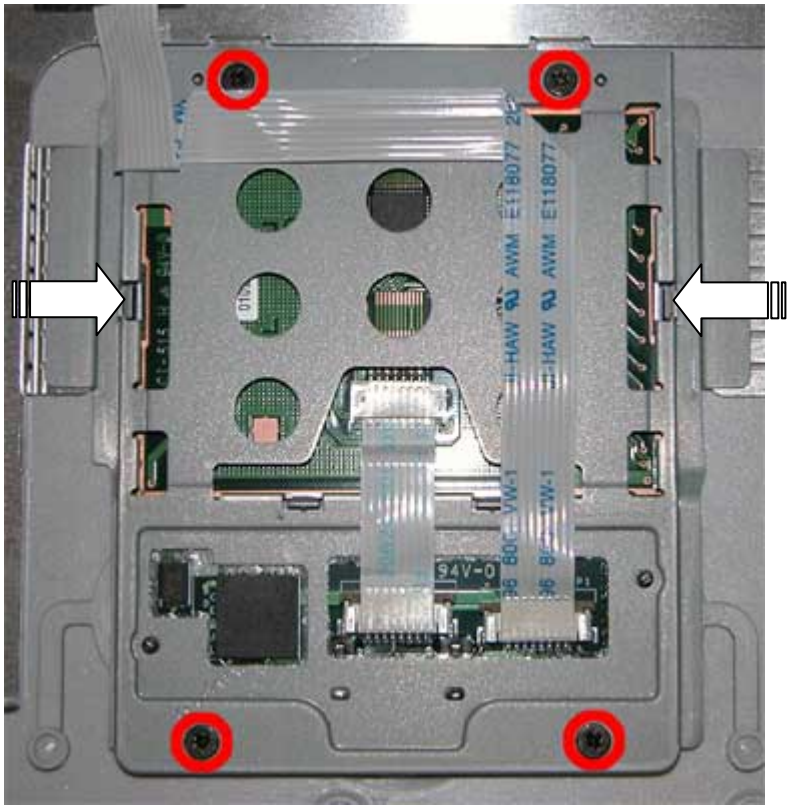
**M2.5x9 Copper**

3. Carefully lift up the Top Cover.

## Removing the Touch Pad

To remove the touch pad, first remove the top cover (see *Removing the Top Cover*), then perform the following steps:

1. Unscrew the screws on the Top Cover as shown in Fig. 33



**M2x3 Copper**

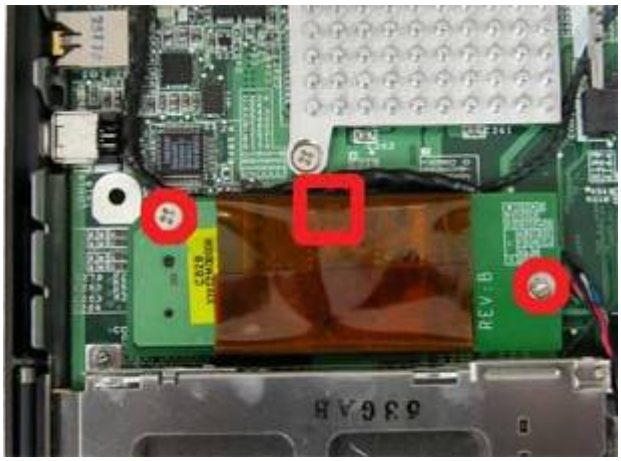
***Fig. 33*** *Touch Pad*

2. Carefully separate the Touch Pad module from Top cover.

## Removing the MDC Modem

To remove the MDC Modem, first remove the top cover (see *Removing the Top Cover*), then perform the following steps:

1. Disconnect cable and release screws on MCD Modem as shown in Fig. 34



M2.5 x 7 Sliver

***Fig. 34*** *MDC Modem*

2. Lift up the MDC modem and put it aside.

## Removing the Bluetooth Module

To remove the Bluetooth Module, first remove the top cover (see *Removing the Top Cover*), then perform the following steps:

1. Disconnect cable on main board as shown in Fig. 35

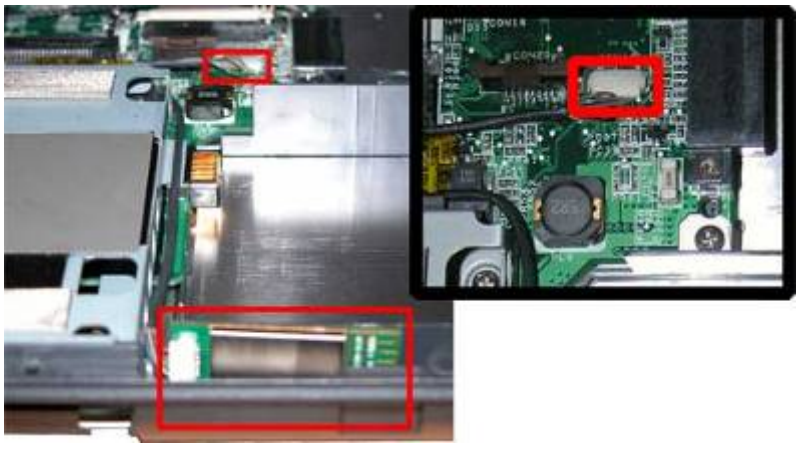


***Fig. 35*** *Bluetooth Module*

2. Carefully separate it from bottom cover and put it aside.

## Removing the Main Board

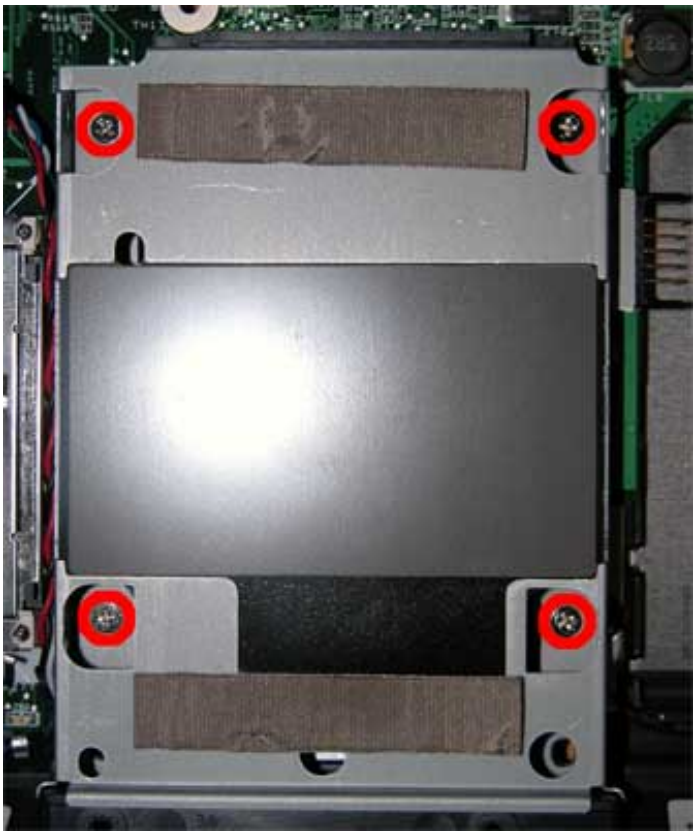
To remove the Main Board, first remove the Top Cover (see *Removing Top Cover*) then perform the following steps:

1. Remove the Hex screws from the VGA Port as shown in Fig. 36

**M2.5x10 Sliver**

***Fig. 36*** *VGA Port*

2. Unscrew those screws on HDD holder as shown in Fig. 37 and separate it carefully from Main Board.



**M2.5 x 7 Sliver**

***Fig. 37*** *HDD Holder*

3. Disconnect Speaker and Lid switch connectors from the Main board and unscrew the screws encircled in Fig. 38

M2.5 x 7 Sliver

***Fig. 38*** *Screws on Main Board*

4. Lift up the Main Board carefully as shown in Fig. 39

***Fig. 39*** *Lifting up the Main Board*

## Removing the Speaker Assembly

To remove the Speaker Assembly, first remove the Main Board (see *Removing the Main Board*) then perform the following steps:

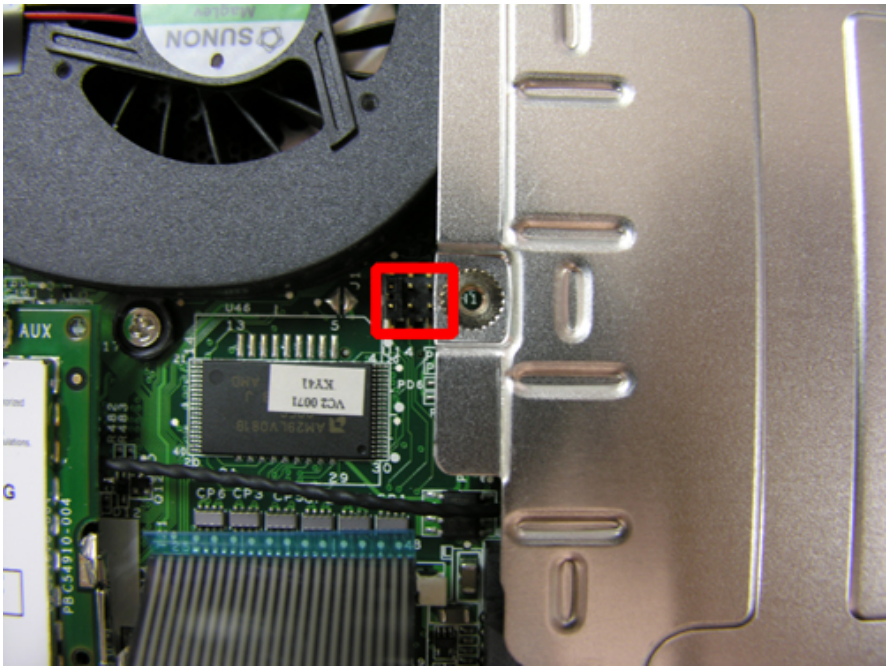
1. Remove the screws holding Speaker Assembly as shown in Fig. 40

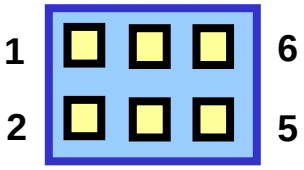
**M2.5x5 Black**

***Fig. 40*** *Speaker Assembly*

2. Carefully remove the Speaker assembly from Bottom Cover and place it aside.

## DIP Switch Settings




| Jumper | Description | Setting |
|---|---|---|
| 1-2 | Keyboard Type | Open - UK Keyboard |
| | | Close - US Keyboard |
| 3-4 | BIOS Logo | Open - NEC |
| | | Close - Packard Bell |
| 5-6 | Reserved | |
| | | |

## Screws

| | | | |
|---|---|---|---|
| | | | |
| **M2x4Sliver** | **M3x7 Copper** | **M2.5x9 Copper** | **M2.5x7 Sliver** |
| | | | |
| **M2.5x5 Black** | **M2.5x10 silver** | **M2x3 Copper** | |

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# VERSA M350/P550 Disassembly Manual

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Document Part Number:
Version: 2.0

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